

Application No. 10/562,176  
Reply to Office Action of April 8, 2008

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A signal processing device comprising:

processing region setting means for setting a processing region within image data wherein a light signal of the real world is projected on a plurality of pixels, each having a time integration effect, and a portion of the continuity of the light signal of the real world is lost;

movement vector setting means for setting movement vectors for an object within said image data corresponding to the continuity of the light signal of the real world, wherein a portion of the continuity of said image data is lost;

model generating means for modeling the relation between the pixel value of each of the pixels within said processing region and the pixel value of each of the pixels without movement blurring occurring, assuming that the pixel value of each of the pixels within said processing region is a value wherein the pixel value of each of the pixels without movement blurring occurring which correspond to said object is integrated while shifting corresponding to said movement vector;

normal equation generating means for generating a normal equation using a first equation wherein the pixel value of each of the pixels within said processing region is substituted into a model generated by said model generating means, and a second equation which constrains the relation between each of the pixels without said movement blurring occurring, said normal equation including a number of equations from the first equation and the second equation which is greater than or equal to a number of pixels without said movement blurring occurring; and

actual world estimating means for estimating a pixel value of each pixel wherein said movement blurring is not occurring, by computing said normal equation which is generated by said normal equation generating means.

Claim 2 (Previously Presented): The signal processing device according to claim 1, wherein said normal equation generating means generates a normal equation using a first equation wherein the pixel value of each of the pixels within said processing region is substituted into the model generated by said model generating means, and a second equation wherein the difference of the pixel value of each pixel wherein said movement blurring is not occurring.

Claim 3 (Currently Amended): A signal processing method comprising:

setting a processing region within image data wherein a light signal of the real world is projected on a plurality of pixels, each having a time integration effect, and a portion of the continuity of the light signal of the real world is lost;

setting movement vectors for an object within said image data corresponding to the continuity of the light signal of the real world, wherein a portion of the continuity of said image data is lost;

modeling the relation between the pixel value of each of the pixels within said processing region and the pixel value of each of the pixels without movement blurring occurring, assuming that the pixel value of each of the pixels within said processing region is a value wherein the pixel value of each of the pixels without movement blurring occurring which correspond to said object is integrated while shifting corresponding to said movement vector;

generating a normal equation using a first equation wherein the pixel value of each of the pixels within said processing region is substituted into a model generated by said modeling, and a second equation which constrains the relation between each of the pixels without said movement blurring occurring, said normal equation including a number of equations from the first equation and the second equation which is greater than or equal to a number of pixels without said movement blurring occurring; and

estimating a pixel value of each pixel wherein said movement blurring is not occurring, by computing said normal equation which is generated by said generating.

Claim 4 (Canceled).

Claim 5 (Currently Amended): A computer readable recording medium including computer executable instructions, wherein the instructions, when executed by a processor, cause the processor to perform a method comprising:

setting a processing region within image data wherein a light signal of the real world is projected on a plurality of pixels, each having a time integration effect, and a portion of the continuity of the light signal of the real world is lost;

setting movement vectors for an object within said image data corresponding to the continuity of the light signal of the real world, wherein a portion of the continuity of said image data is lost;

modeling the relation between the pixel value of each of the pixels within said processing region and the pixel value of each of the pixels without movement blurring occurring, assuming that the pixel value of each of the pixels within said processing region is a value wherein the pixel value of each of the pixels without movement blurring occurring

which correspond to said object is integrated while shifting corresponding to said movement vector;

generating a normal equation using a first equation wherein the pixel value of each of the pixels within said processing region is substituted into a model generated by said modeling, and a second equation which constrains the relation between each of the pixels without said movement blurring occurring, said normal equation including a number of equations from the first equation and the second equation which is greater than or equal to a number of pixels without said movement blurring occurring; and

estimating a pixel value of each pixel wherein said movement blurring is not occurring, by computing said normal equation which is generated by said generating.

Claim 6 (Currently Amended): A signal processing device comprising:

a processing region setting unit configured to said a processing region within image data wherein a light signal of the real world is projected on a plurality of pixels, each having a time integration effect, and a portion of the continuity of the light signal of the real world is lost;

a movement vector setting unit configured to set movement vectors for an object within said image data corresponding to the continuity of the light signal of the real world, wherein a portion of the continuity of said image data is lost;

a model generating unit configured to model the relation between the pixel value of each of the pixels within said processing region and the pixel value of each of the pixels without movement blurring occurring, assuming that the pixel value of each of the pixels within said processing region is a value wherein the pixel value of each of the pixels without movement blurring occurring which correspond to said object is integrated while shifting corresponding to said movement vector;

a normal equation generating unit configured to generate a normal equation using a first equation wherein the pixel value of each of the pixels within said processing region is substituted into a model generated by said model generating unit, and a second equation which constrains the relation between each of the pixels without said movement blurring occurring, said normal equation including a number of equations from the first equation and the second equation which is greater than or equal to a number of pixels without said movement blurring occurring; and

an actual world estimating unit configured to estimate a pixel value of each pixel wherein said movement blurring is not occurring, by computing said normal equation which is generated by said normal equation generating unit.

Claim 7 (Previously Presented): The signal processing device according to claim 6, wherein said normal equation generating unit is configured to generate a normal equation using a first equation wherein the pixel value of each of the pixels within said processing region is substituted into the model generated by said model generating unit, and a second equation wherein the difference of the pixel value of each pixel wherein said movement blurring is not occurring.